

OUR OCEAN FUTURE* **(Executive Summary)**

Presented by Charles A. Bookman

Project Manager, John H. Heinz, III Center for Science, Economics and the Environment

The United States is surrounded by one of the largest, richest, and most diverse marine territories of any nation. From the Arctic Ocean bordering Alaska to the Atlantic, Caribbean, and Pacific oceans framing the mainland, Americans enjoy and prosper from an abundance of marine resources and activities, including productive fisheries, global trade, coastal recreation, mineral and energy production, and diverse marine ecosystems. But today these resources and activities face an array of threats, which at best may result in lost opportunities and at worst can cause irreparable damage. Regrettably, the environmental quality of marine areas and resources, and the economic value of vital ocean and coastal industries such as trade, tourism, and fishing (and the communities that depend on these activities), will be in jeopardy unless effective measures are taken immediately to safeguard, protect, and restore America's oceans and coasts.

After consulting with 200 ocean and coastal leaders from industry, government, academia, and environmental organizations, The Heinz Center Steering Group for the Year of the Ocean has concluded that there is an urgent need for a systematic and comprehensive review of ocean and coastal policies and programs. Unless action is taken now, significant benefits to the economy and quality of life will be lost, and the United States will fall behind other nations in using and conserving the oceans and their resources. An integrated vision, and a plan for achieving it, must be developed for U.S. marine areas, resources, and activities. A restructuring of national, regional, and local mechanisms for managing oceans and coasts may be necessary, along with new investments in science, education, and management.

On the positive side, a great diversity of stakeholders, including all levels of government, are interested in helping to develop and implement solutions. Members of the Steering Group believe that an independent commission mandated by the U.S. Congress and supported by the Executive Branch of the U.S. Government offers a means to rethink the nation's stake in the ocean and decide how to address the related challenges and opportunities. The commission would be charged with making recommendations to rejuvenate the nation's ocean and coastal policies and programs and realign them for the future.

Ocean Issues Facing the Nation

The preeminent challenge for the United States is to achieve integrated management that balances the use of ocean resources with the conservation of those resources. Enormous economic and environmental benefits would result. This challenge can be met if the nation can overcome the obstacles that have blocked progress in the past. The three principal obstacles are the following:

The nation has underinvested in the physical and technological infrastructure necessary for the efficient use of the oceans and coasts. Elements of this infrastructure include ports and waterways, research laboratories and facilities, and marine services.

The national and international institutions and mechanisms for governing and managing ocean and coastal areas and resources are often fragmented and have conflicting mandates. Insufficient effort has been devoted to developing and applying the knowledge necessary for wise management.

* *The Heinz Center, 1998. Our Ocean Future. Washington, D.C., John H. Heinz III Center for Science, Economics and the Environment.*

The Steering Group defined the dimensions of these obstacles and explored potential solutions in three national meetings convened to focus on the following broad issues: managing the U.S. coasts for economic and environmental prosperity, protecting and restoring fisheries and other living marine resources, and advancing and applying ocean science and technology for the use and conservation of the marine environment.

Managing the Coasts for Economic and Environmental Prosperity

Every American is affected by the oceans. As vast as they are, the oceans can also be harmed by humans. Changes in oceanic conditions in the far Pacific can determine whether the next growing season for Midwestern farmers will be wet or dry. Conversely, agricultural practices, sewage processing, automobile emissions, and other human activities generate by-products that contain nitrogen or other nutrient elements, which eventually find their way into the ocean. Excess nutrients in coastal waters can trigger harmful blooms of marine organisms that adversely affect coastal water quality and fishery resources. Every year, some Americans have to change vacation plans because of beach closures, or endure “fish scares” in the seafood marketplace, because of broad-based concerns about environmental quality and public health.

The United States is by far the world’s largest marketplace. American factories and stores depend on imported goods. Approximately 40 percent of the total value of U.S. foreign trade (and a much larger share by weight, including half of the petroleum that fuels the economy) is carried by ship. These goods and products are funneled through ports, which provide an essential link between land and sea. Yet the economic importance of ports is increasingly transparent to the consumer, who does not always appreciate the need to ensure the efficiency and safety of marine transportation. Many other activities, ranging from beachfront development to ocean-dependent industries, also have economic ramifications. All of these vital activities depend on the nation’s capability to manage marine activities, conserve and protect coastal and ocean resources, and, ultimately, understand the sea.

To meet the challenge of protecting and conserving the coastal environment, the United States will need to manage the oceans and coasts in new ways. The economic and other consequences of coastal storms and erosion need to be reduced, and sustainable economic growth needs to be achieved in marine recreation, marine resource development, global trade, and other activities. Progress in these areas increasingly lies beyond direct federal control. A rich experience base is emerging on partnership approaches that build on the roles and capabilities of the private sector; the knowledge base provided by scientific researchers; and the conservation and economic development tools of local, state, and federal governments. Solutions and innovations today often require the participation of all stakeholders, including every level of government. The process of learning to achieve progress through cooperation more routinely and more effectively will be a major undertaking, with important implications for governing institutions at every level.

Protecting and Restoring Fisheries and Other Living Marine Resources

The nation also faces a difficult challenge in developing a management regime that ensures sustainable fisheries and fishing communities while also protecting and nurturing marine biodiversity. Many U.S. fish stocks are still overutilized despite some successful restoration efforts. Although the commitment to conservation has been strengthened in recent legislation, a great deal of work remains to be done to ensure that this resolve is honored in practice. Fishery managers today need to muster the resources and political will to identify and protect essential fish habitat, address the problems of overfishing and excess fishing capacity, minimize bycatch, address the future of aquaculture and its potential impacts on the marine environment, and apply management techniques that work across jurisdictions and conserve ecosystem values such as the protection of biodiversity.

Advancing and Applying Ocean Science and Technology

Advances in ocean science and technology can be applied to gain important new knowledge that will help build a sustainable future. With new technologies and observing systems, new levels of accuracy are

becoming possible in the prediction of natural disasters and climate change. With new knowledge of plate tectonics, scientists have begun to understand the evolution of the Earth and the implications for predicting earthquakes and the distribution of mineral resources. The recent identification of exotic life forms around deep-sea hydrothermal vents suggests that the oceans still harbor many undiscovered treasures, perhaps including clues to the origins of life. The growing understanding of the complexities, fragility, and resilience of ocean ecosystems positions humanity to use the living resources of the sea without adversely affecting their sustainability. But to realize the full potential of ocean science, new investments in research, education, facilities, and international collaboration will be required.

Moving Forward

Americans care deeply about the oceans and coasts. The Year of the Ocean, 1998, provides a unique opportunity to reflect on, and chart, a new and more effective course for managing them. Essential roles in this endeavor are already being performed by industry, government agencies at all levels, research and educational institutions, and nongovernmental organizations. Buoyed by strong public interest, all are poised to continue to work together toward America's new ocean future. The best chance for achieving their shared vision lies in the establishment of an independent commission composed of the nation's ocean leaders, who can recommend the most economically and environmentally beneficial directions for U.S. ocean policy and programs in the next century.